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### Certificate Under 37 C.F.R. § 3.73(b)

Applicant/Patent Owner: Fredric R. Bloom, Jonathan Kuo, Jhy-Jhu Lin and Jin Ma

Application No./Patent No.: 09/227,742 Filed/Issue Date: January 8, 1999

Entitled: Method for Increasing Viability and Transformation Efficiency of Bacteria During Storage at Low Temperatures

Invitrogen Corporation, a corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest, or
2. ☐ an assignee of an undivided part interest

in the patent application/patent identified above by virtue of either:

- A. ☐ An Assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

- B. ☒ A chain of title from the inventor(s) of the patent application/patent identified above to the current assignee as shown below:

1. From: Fredric R. Bloom, Jonathan Kuo, Jhy-Jhu Lin and Jin Ma To: Life Technologies, Inc.  
The document was recorded in the Patent and Trademark Office at Reel 9321, Frame 0054, or for which a copy thereof is attached.
2. From: Life Technologies, Inc. To: Invitrogen Corporation  
The document was recorded in the Patent and Trademark Office at Reel 012984, Frame 0347, or for which a copy thereof is attached.
3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the PTO. See MPEP 302-302.8]

The undersigned (whose title is supplied below) is empowered to act on behalf of the assignee.

Signature: Alan W. Hammond

Name: Alan W. Hammond

Title: Chief Intellectual Property Counsel

Date: September 18, 2003

## ASSIGNMENT

DO NOT FORWARD  
TO ASSIGNMENT BRANCH  
NOT FOR RECORDATION

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned: Fredric R. Bloom, Jonathan Kuo, Jhy-Jhu Lin, and Jin Ma the undersigned hereby sells and assigns to Life Technologies, Inc. having its business address at 9800 Medical Center Dr., Bethesda, MD U.S.A., (the Assignee) his/her entire right, title and interest

check applicable boxes: X : for the United States of America (as defined in 35 U.S.C. § 100)  
X : and throughout the world,

in the inventions known as Method for Increasing Viability and Transformation Efficiency of Bacteria During Storage at Low Temperatures for which application for patent in the United States of America has been executed by the undersigned on March 17, 18 and 21, 1998 (also known as United States Application No. 08/826,476, filed March 27, 1997), in any and all applications thereon, in any and all Letters Patent therefor, and in any and all reissues, extensions, renewals, reexaminations of such applications or Letters Patent and divisional and continuation applications thereof, to the full end of the term or terms for which such Letters Patent issue, including all claims, if any, that may have arisen for infringement prior to the date of this assignment, such entire right, title and interest to be held and enjoyed by the above-named Assignee to the same extent as they would have been held and enjoyed by the undersigned had this assignment and sale not been made.

The undersigned agree to execute all papers necessary in connection with the application and any continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree to execute all papers necessary in connection with any interference that may be declared concerning the application or any continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

The undersigned hereby represent that the undersigned has full right to convey the entire interest herein assigned, and that the undersigned has not executed, and will not execute, any agreement in conflict therewith.

The undersigned hereby grant

Jeffrey I. Auerbach, Reg. No. 32,680  
Melvin L. Barnes, Jr. Reg. No. 38,375  
Michael J. Bell, Reg. No. 39,604  
Mark R. Buscher, Reg. No. 35,006  
Celine T. Callahan, Reg. No. 34,301  
Cono A. Carrano, Reg. No. 39,623  
Joseph V. Colaianni, Reg. No. 39,948  
James F. Davis, Reg. No. 21,072  
Thomas M. Dunham, Reg. No. 39,965  
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Leslie L. Jacobs, Jr., Reg. No. 40,659  
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David R. Marsh, Reg. No. 41,408  
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Andrew Piatnicia, Reg. No. 40,772  
Andrea G. Reister, Reg. No. 36,253  
Stephen J. Rosenman, Reg. No. 29,209  
Timothy L. Scott, Reg. No. 37,931  
Anthony W. Shaw, Reg. No. 30,104  
J. David Smith, Reg. No. 39,839  
Michael J. Songer, Reg. No. 39,841

of HOWREY & SIMON, BOX No. 34, 1299 PENNSYLVANIA Avenue, N.W., Washington, D.C. 20004-2402, power to insert in this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

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IN WITNESS WHEREOF, executed by the undersigned on the date opposite their names.

Date: 3/7/98 Signature of Inventor: Fred R Blum  
Date: 3/18/98 Signature of Inventor: Ch 3/18/98  
Date: 3/21/98 Signature of Inventor: [Signature]  
Date: 3/18/98 Signature of Inventor: [Signature]

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State of Delaware  
Office of the Secretary of State

PAGE 1

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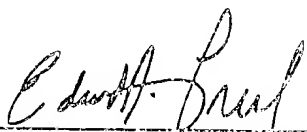
I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF  
DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT  
COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

"LIFE TECHNOLOGIES, INC.", A DELAWARE CORPORATION,

WITH AND INTO "INVITROGEN CORPORATION" UNDER THE NAME OF  
"INVITROGEN CORPORATION", A CORPORATION ORGANIZED AND EXISTING  
UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED  
IN THIS OFFICE THE THIRTEENTH DAY OF SEPTEMBER, A.D. 2000, AT  
4:30 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF  
THE AFORESAID CERTIFICATE OF MERGER IS THE FOURTEENTH DAY OF  
SEPTEMBER, A.D. 2000.



  
Edward J. Freel, Secretary of State

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AUTHENTICATION: 0679689

001468678

DATE: 09-18-00

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NO. 157 002

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**CERTIFICATE OF MERGER  
MERGING  
LIFE TECHNOLOGIES, INC.  
INTO  
INVITROGEN CORPORATION**

Pursuant to Section 251 of the  
General Corporation Law of Delaware

The undersigned corporation, organized and existing under and by virtue of the General Corporation Law of the State of Delaware, does hereby certify:

**FIRST:** That the name and state of incorporation of each of the constituent corporations of the merger is as follows:

<u>Name</u>	<u>State of Incorporation</u>
Life Technologies, Inc.	Delaware
Invitrogen Corporation	Delaware

**SECOND:** That an agreement and plan of merger between the parties to the merger has been approved, adopted, certified, executed and acknowledged by each of the constituent corporations in accordance with the requirements of Section 251 of the General Corporation Law of the State of Delaware.

**THIRD:** That Invitrogen Corporation, a Delaware corporation, shall be the surviving corporation of the merger and its certificate of incorporation shall be the certificate of incorporation of the surviving corporation.

**FOURTH:** That the executed agreement and plan of merger is on file at the principal place of business of the surviving corporation. The address of the principal place of business of the surviving corporation is 1600 Faraday Avenue, Carlsbad, CA 92008.

**FIFTH:** That a copy of the agreement and plan of merger will be furnished by the surviving corporation, on request and without cost to any stockholder of any constituent corporation.

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SENT BY:

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SIXTH: That this Certificate of Merger shall be effective at 3.00 p.m. on  
September 14, 2000.

Dated: September 13, 2000

Invitrogen Corporation,  
a Delaware corporation

By:   
Lyle C. Turner  
President and CEO

ATTEST:

  
James R. Glynn  
Executive V.P. and CFO

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